(b) if so, the details thereof and the number of rural areas being equipped with solar energy system, State-wise;

(c) whether grant is being paid by Government to individual or private institutions who have interest to install solar energy system; and

(d) if so, the deails thereof?

THE MINISTER OF STATE OF THE MINISTRY OF NEW AND RENEWABLE ENERGY (SHRI VILAS MUTTEM WAR): (a) and (b) The Ministry of New and Renewable Energy is implementing several programmes to promote use of solar energy devices and systems in the country including rural areas. The programmes are the Solar Photovoltaic Programme, Remote Village Eelctrification Programme, Solar Photovoltaic Water Pumping Programme, Solar Lantern Programme and Solar Thermal Energy Programme. Under these programmes, financial assistance is being provided on purchase/installation of dish type solar cookers, solar lanterns, solar home lighting systems, solar street lighting systems; solar pumping systems and solar power plants etc. The eligibility criterion and the quantum of support is different under different programmes, In addition to the above, a scheme on "Accelerated Development and Deployment of Solar Water Heating Systems in domestic, Industrial and Commercial Sectors" is also being implemented under which soft loan is available to the beneficiaries through selected banks and Indian Renewable Energy Development Agency Ltd. for installation of solar water heating systems.

The State-wise details of the solar photovoltaic systems installed in the country including the rural areas are given in enclosed Statement-I and II *{See* below).

(c) and (d) The details of financial assistance provided by the Ministry, including to individuals and private institutions for installations of solar energy system are given in enclosed Statement-Ill, IV and V.

Statement-I

State-wise Installations under solar Photovoltaic Programmes as on 29th February, 2008

SI. No.	State/UT	SPV Pumps		Solar Photovoltaic		
		Nos.	Street Lights	Home Lights Nos.	Solar Lantern	Power Plant (Kwp)
1	2	3	4	5	6	7
1.	Andhra Pradesh	613	3733	1628	35152	21.66
2.	Arunachal Pradesh	1	788	1770	9937	7.90
3.	Assam	45	98	5870	711	7.5
4.	Bihar	139	690	2771	50117	0.00
5.	Chhattisgarh	93	1409	7028	3192	0.00
6.	Goa	15	283	223	603	1.72

1	2	3	4	5	6	7
7.	Gujarat	85	2004	5915	31603	29.90
8.	Haryana	469	3793	22698	41465	250.40
9.	Himachal Pradesh	6	2994	16840	22470	1.50
10	Jammu & Kashmir	39	54%	15769	27509	175.60
11	Jharkhand	0	620	4035	16374	0.00
12	Karnataka	532	2271	23038	7334	29.41
13	Kerala	810	1090	32326	41181	44.70
14	Madhya Pradesh	87	6054	1307	8564	22.40
15	Maharashtra	228	3491	825	8683	644
16	Manipur	12	370	2850	3883	28.00
17	Meghalaya	19	1273	7040	24875	50.50
18	Mizoram	37	315	3045	5812	109.00
19	Nagaland	0	271	218	3437	6.00
20	Orissa	8	5819	4485	9882	36.52
21	Punjab	1821	3037	4620	14995	71.00
22	Rajasthan	283	6632	50551	4716	25.80
23	Sikkim	0	162	1805	720	14.70
24	Tamil Nadu	829	2672	1557	16818	30.05
25	Tripura	25	760	2800	28000	24.57
26	Uttar Pradesh	751	950	52997	51683	12920
27	Uttarkhand	26	1169	43331	56523	80.03
28	West bengal	48	2111	76304	3662	675.00
29	Andaman & Nicobar	5	358	405	62%	167.00
30	Chandigarh	12	0	275	1675	0.00
31	Dadar & Nagar Haveli	0	0	0	i>	0.00
32	Daman & Diu	0	0	0	0	000
33	Delhi	89	301	0	4753	30.00
34	Lakshadweep	0	0	0	0	85.00
35	Pondicherry	21	310	25	1637	0.00
36	Others	0	9150	8584	125797	58.00
	TOTAL:	7148	70474	402938	670059	2219.5

Statement-H

State-wise details of remote villages/hamlets taken up for electrification/lighting through SPV Systems during the last three years

SI. No.	State/Union Territory	Villages/Han during 2005 Sanctioned Co 117	ilets -06 mpleted Sa 20	Villages/Ha n during 2006 nctioned Co 11	nlets i-07 mpleted Sar 50	Villages/Ha ml during 2007-(as on 29.2.C ictioned	ets 08 08) npleted Coi * 67
1.							
2.	Assam	33	0	**429**	0	555	16
3.	Chhattisgarh	0	0	43	0	36	0
4.	Gujarat	36	0	0	0	0	36
5.	Jharkhand	224	29	108	234	0	61
6.	Manipur	40	3	14	25	0	0
7.	Meghalaya	0	1	70	0	0	0
8.	Mizoram	0	7	0	13	0	0
9.	Tripura	0	0	0	205	205	165
10.	Uttaranchal	0	164	103	0	0	0
11.	West Bengal	5	49	0	135	0	0
12	J&K	0	0	0	27	27	13
13.	M.P.	50	0	100	30	0	42
14.	Maharashtra	161	0	94	110	0	55
15.	Rajasthan	230	0	73	129	0	89
16.	Karnataka	20	0	0	0	46	16
17.	Orissa	—	0	187	0	0	36
18.	Nagaland	—	0	3	0	0	3
19.	Haryana	—	0	149	45	0	149
20.	Sikkim	—	—	—	13	0	0
21.	UP.	—	—	—	0	0	20
	TOTAL	916	273	1384	1016	869	768

*as per the reports received upto 31.1.08

Statement-Ill

State-wise release of funds under SPA Programmes during 2004-05, 2005-06 & 2006-07

(Rs. in lakhs)

SI. No.	States/UTs	V	Release of funds during year 2004-05	Release of funds during year 2005-06	Release of funds during year 2006-07
1	2			4	5
1.	Andhra Pradesh			45.83	24.77
2.	Arunachar		3 20.22	30.81	280.60
3.	Pradesi Assam-			50.00	0
4.	Bihar			9.12	22.95

12		3	4	5
5.	Chhattisgarh	71.41	—	36.50
6.	Goa	—	—	13.25
7.	Gujarat ,	—	0.67	175.38
8.	Haryana	—	131.14	326.82
. 9.	Himachal Pradesh	88.00	—	491.19
10.	Jammu & Kashmir	17324	—	210.33
11.	Jharkhand		5.91	0
12.	Karnataka	14327	316.35	27223
13.	Kerala	—	74.54	0
14.	Madhya Pradesh	24.88	2.50	123.71
15.	Maharashtra	18.00	97.60	239.90
16.	Manipur	—	24.98	15.95
17.	Meghalaya	—	154.76	424.78
18.	Mizoram	2822	106.87	100.90
19.	Nagaland	—	6.98	94.90
20.	Orissa	—	226	76.48
21.	Punjab	—	11.80	62.90
22.	Rajasthan	—	246.16	396.50
23.	Sikkim	26.00	—	107.71
24.	Tamil Nadu	—	72.00	242.88
25.	Tripura		1.71	0
26.	Uttar Pradesh	154.00	167.43	169.85
27.	Uttarakhand	—	268.65	1238.16
.28.	West Bengal	37.38	325.81	341.03
29.	A&N Island	—	—	0
30.	Chandigarh	—	—	0
31.	Delhi	—	—	0
32.	Lakshadweep	—	—	0
33.	Pondicherry	1.65	5.09	2.00
34.	Others	261.6	500.76	11326
	TOTAL	1047.87	2659.73	5642.38

Statement-IV

State-wise details of fund Released Remote Village Electrification Programme

(Rs. in. lakhs)

SI. No.	State	2005-06	2006-07	2007-08 (as on 29.2.08)
1	2	3	4	5
1.	ndhra Pradesh	0.00	7.00	0
	runachal Pradesh	293.00	156.28	197.52
A	ssam ihar	32.00	346.58	4464.57
2.		0.00		0

1	2	3	4	5
5.	Chhattisgarh	275.5	363	290.50
6.	Gujarat	45.00	—	0
7.	Haryana	0.00	123.99	0
8.	Himachal Pradesh	160.00	64.88	0
9.	Jammu & Kashmir	2.5	—	58322
10.	Jharkhand	1197.00	312	141629
11.	Karnataka	49.00		106.03
12.	Kerala	0.00	1.61	0
13.	Madhya Pradesh	28.00	17721	40324
14.	Maharashtra	285.00	810.86	1125.60
15.	Manipur	381.00	585.59	106.57
16.	Meghalaya	0.00	135.72	103.79
17.	Mizoram	0.00	—	0
18.	Nagaland	0.00	17.34	0
19.	Orissa	5.5	49627	276.00
20.	Rajasthan	247.00	51.00	861.00
21.	Sikkim	0.00	—	0
22.	Tamil Nadu	0.00	—	0
23.	Tripura	0.00	352.07	547.31
24.	Uttaranchal	147.00	346.63	198.93
25.	Uttar Pradesh	0.00	0.00	0.00
26.	West Bengal	953.00	136626	0.00
27.	Others	51.00	0.00	23.82
	TOTAL:	4152	571433	1070439

Statement- V

State-wise Year-wise Expenditure on Solar Thermal Programme

(Rs. in lakhs)

SI. No.	State/Banks	2004-05#	2005-06*	2006-07*	2007-08* (upto 29.022008)
1	2	3	4	5	6
1.	Andhra Pradesh	21.94	3.97	19.43	25.31
2.	Arunachal Pradesh	—	4.00	—	—
3.	Bihar		—	—	—
4.	Chandigarh		0.08	—	037
5.	Chhattisgarh	0.13	14.16	1120	—
6.	Delhi	6.40	1.00	8.50	6.36
7.	Gujarat	3,720	36.30	10521	50.59
8.	Haryana	20.30	34.64	28.50	48.46

1	2	3	4	5	6
9.	Himachal Pradesh	030	1.77	14.43	
10.	J&K	0.10	320		0.80
11.	Karnataka	—	7.00	40.00	16.91
12.	Kerala	0.08	—		5.72
13.	Meghalaya	0.08	—		
14.	M.P.	230	0.50	530	2.02
15.	Maharashtra	27.36	1037	30.98	25.89
16.	Mizoram	1536	3.84		9735
17.	Orissa	2.80	—		3.92
18.	Pondicherry	0.08	—		
19.	Punjab	4.00	— ...		
20.	Rajasthan	4.95	—	032	0.72
21.	Sikkim	—	—	2.43	
22.	Tamil Nadu	4.15	3523	10.39	11.08
23.	U.P	21.70	736	2.00	52.89
24.	Uttarakhand	2.78 .	338	8.17	333
25.	West Bengal	3.79 •	—	0.75	
26.	IREDA/Banks	515.00	2250.00	1013.10	1229.47
	TOTAL:	690.98	2417.19	1300.71	1581.19

Encouragement to non-conventional energy sector

tl014. SHRI SHREEGOPAL VYAS:
SHRI BALAVANT *ALIAS* BALAPTE:
SHRIMATI MAYA SINGH:

Will the Minister of NEW AND RENEWABLE ENERGY be pleased to state:

(a) whether it is a fact that non-conventional energy sector is not getting the required encouragement;

(b) whether any tax rebate for the corporate houses in this sector is under consideration;

(c) with which countries talks for exchange of technology in this sector are going on; and

(d) whether export is also being done or it has better prospects in future and if so, the details thereof?

THE MINISTER OF STATE OF THE MINISTRY OF NEW AND RENEWABLE ENERGY (SHRI VILAS MUTTEMWAR): (a) No, Sir. The Government has been giving due encouragement to the renewable energy sector through a mix of fiscal and financial incentives that include capital/interest subsidy, accelerated depreciation, nil/concessional excise and customs duties. Further, benefit under Section 80-1A of Income Tax Act, 1961 is available to undertakings setup for the generation or generation and. distribution of Renewable power in India. This apart, preferential tariff for grid interactive renewable power is being given in most potential States.

(b) There is no such proposal at present.

tOriginal notice of the question was received in Hindi.

(c) Avenues for cooperation in renewable energy sector are being explored with several countries that include, *inter-alia,* Brazil, Denmark, Germany, Japan, Iceland, Italy, Philippines, South Africa, Thailand and USA.

(d) Renewable energy products are already being exported mainly in the wind energy, small hydro, solar and biomass energy sectors. The prospects for such exports are expected to only improve with rising global oil prices.

Shortage of power

1015. SHRI DARA SINGH:
SHRI RAMDAS AGARWAL:

Will the Minister of NEW AND RENEWABLE ENERGY be pleased to state:

(a) whether the country faces acute shortage of energy and is spending more than Rs. 1,00,000 crore on power generation and distribution;

(b) whether solar energy holds the key for power-hungry India, but the same has not been adequately tapped;

(c) what concrete steps Government has taken so far to tap the sun for energy, when advanced solar energy technologies are available; and

(d) the details of Government's plans for expansion and utilization of solar energy resources for domestic and commercial purposes during the Eleventh Five Year Plan?

THE MINISTER OF STATE OF THE MINISTRY OF NEW AND RENEWABLE ENERGY (SHRI VILAS MUTTEMWAR): (a) to (d) Yes, Sir. There is gap in the demand and supply of power in the country. The renewable energy sources such as wind, small hydro and biomass have contributed about 11274 MW to the capacity addition of power generation in the country.

India received solar energy equivalent to over 5,000 trillion KWh per year. The daily average solar energy incident over India varies from 4-7 kwh per square meter depending upon the location. Solar energy can be harnessed through two routes, namely solar photovoltaic (PV) and solar thermal, by direct conversion to electricity and heat energy respectively, Thus solar energy has potential to meet growing demand of energy. The high initial cost of solar energy devices and systems, and lack of sufficient awareness are the main reasons for low utilization of this resource. However, some of the solar energy systems are becoming cost competitive to the conventional alternatives, when compared over the life of the systems. Solar water heaters, solar cookers and photovoltaic systems for small power applications in remote areas are the examples.

The Ministry has taken several steps to increase the utilization of solar energy in the country during the 11th plan, which include (i) expanded programme of the Ministry to encourage utilization of solar energy systems through subsidy or soft loans, (ii) incentive to manufacturers, commercial users and power project developers, (iii) research and development to reduce the cost, improve the efficiency and performance of solar energy systems, and (iv) support to Akshya Urja shops to provide additional channels for sale and after-sales servicing of solar energy systems and (v) create awareness about the solar energy systems and their benefits.